2022 Annual Inspection Report

Gavin Power, LLC

Bottom Ash Pond

Gavin Power Plant
Cheshire, Ohio

6 January 2023

Project No.: 0589450

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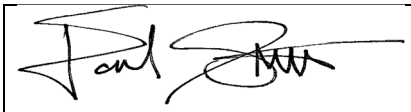
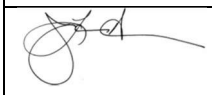
6 January 2023

2022 Annual Inspection Report

Bottom Ash Pond
Gavin Power Plant
Cheshire, Ohio

 David Shotts, P.E. *Principal-in-Charge*		 Joseph Robb, P.G. *Project Manager*
 James Hemme, P.E., L.R.S., M.B.A. *Professional Engineer*		 Michael Eisen, P.E., M.B.A. *Professional Engineer*
 J. Lawrence Hosmer, P.E. *Associate*		

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CONTENTS

List of Tables

List of Figures

Acronyms and Abbreviations

BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
BMPs	Best Management Practices
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
ERM	ERM Consulting & Engineering, Inc.
MSL	Mean Sea Level
PI	Plant's Information (System)
Plant	Gavin Power Plant
RWL	Residual Waste Landfill

1. INTRODUCTION

The Bottom Ash Pond (BAP) at the Gavin Power Plant (Plant) in Cheshire, Ohio is a surface impoundment subject to the Code of Federal Regulations (CFR) Title 40, Part 257, Subpart D, "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," known as the Coal Combustion Residuals (CCR) Rule. The CCR Rule requires an annual inspection and reporting for surface impoundments.

This Annual Inspection Report for this impoundment has been prepared by ERM Consulting & Engineering, Inc. (ERM) to comply with these requirements of the CCR Rule, 40 CFR § 257.83(b).

1.1 Summary of Conditions of Annual Inspection

Mr. James Hemme, P.E., the certifying Professional Engineer and Mr. Michael Eisen, P.E., performed the annual inspection and prepared this annual inspection report. Mr. Colin McKean, the Landfill Process Owner at Gavin Power, was the facility contact and provided support during the inspection process. Other members of the Gavin Power team also assisted with logistics and provided data for the completion of the inspection and report. In addition, per 40 CFR § 257.83(a), weekly and monthly inspections were completed on the CCR surface impoundments by Mr. Colin McKean, the Landfill Process Owner at Gavin Power.

The inspection of the BAP was performed on 12 October 2022. Weather on that date consisted of partly overcast to clear skies, light wind, and temperatures ranging from 50 degrees Fahrenheit (°F) to 75°F. In the seven days prior to inspection, no precipitation was recorded at the rain gauge at the Plant.

1.2 Regulatory Cross-Reference Table

Per 40 CFR § 257.83(b)(1), annual inspections must be completed on CCR surface impoundments by a qualified Professional Engineer. James Hemme, P.E., the certifying engineer, maintains a professional engineering license in the State of Ohio. Table 1, below, is a regulatory cross-reference table that describes the inspection requirements and the location in this report that addresses these requirements.

Table 1: Federal Regulatory Requirement Cross-Reference Table

Federal Regulatory Requirement Summary	Location in the Annual Report
§ 257.83(b)—Annual inspections by a qualified professional engineer	Sections 1.1 and 1.2
§ 257.83(b)(1)(i)—A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., CCR unit design and construction information, previous periodic structural stability assessments, the results of inspections by a qualified person, and results of previous annual inspections)	Section 5
§ 257.83(b)(1)(ii))—A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures	Section 3; Appendix A
§ 257.83(b)(1)(iii)—A visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation	Section 3; Appendix A
§ 257.83(b)(2)(i))—Any changes in geometry of the impounding structure since the previous annual inspection	Section 2.2
§ 257.83(b)(2)(ii)—The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	Section 4; Appendix C
§ 257.83(b)(2)(iii)—The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection	Table 2
§ 257.83(b)(2)(iv)—The storage capacity of the impounding structure at time of inspection	Table 2
§ 257.83(b)(2)(v)—The approximate volume of the impounded water and CCR at time of the inspection	Table 2
§ 257.83(b)(2)(vi)—Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR and appurtenant structures	Section 3; Appendix A
§ 257.83(b)(2)(vii)—Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection	Section 3; Appendix A

2. GAVIN PLANT INFORMATION

2.1 Facility Overview

The Gavin Power Plant is a coal-fired power station located in Gallia County, Ohio, immediately south of Cheshire, Ohio, and adjacent to State Route 7, as depicted on **Figure 1**. The Plant is also adjacent to the western shoreline of the Ohio River. Nearby towns include Addison, Ohio and Point Pleasant, West Virginia.

2.2 Bottom Ash Pond

The BAP is adjacent to Ohio State Route 7, immediately south of the Plant and west of the Ohio River. The Reclaim Pond abuts and is located to the northwest of the Bottom Ash Pond. The two ponds comprise the Bottom Ash Complex (BAC). The Reclaim Pond was not designed to retain an accumulation of CCR and does not treat, store or dispose of CCR; thus, the Reclaim Pond is not considered a CCR Surface Impoundment under the CCR Rule. The location of the Bottom Ash Pond is depicted on **Figure 1**, and the general layout of the BAP is presented on **Figure 2**. Photographs of the Bottom Ash Pond at the time of the annual inspection are provided in **Appendix A**.

The BAP and the Reclaim Pond consist of continuous earthen embankments that surround the BAC on all four boundaries. The BAP and Reclaim Pond are separated by landscaped pond embankments and a gravel access road. Bottom ash slurry is pumped into the Bottom Ash Pond from the Plant. Note that Unit 1 ceased sluicing ash in March 2022, and Unit 2 ceased sluicing ash on 1 October 2022. The water from the Bottom Ash Pond is then decanted through a reinforced concrete drop inlet structure into the Reclaim Pond. As part of ongoing maintenance of the BAP, regular material dredging is conducted around the pond inlets, along the eastern embankment. This material is stockpiled and later transported to the Residual Waste Landfill (RWL). Within the Reclaim Pond, stored water is pumped to the Plant for reuse or discharged to the Ohio River via an overflow structure, in conformance with the Plant National Pollutant Discharge Elimination System permit. **Table 2** provides current operational and geometry information for the BAP, as required by 40 CFR § 257.83(b)(2)(iii), (iv), and (v). ERM did not observe changes in the geometry of the BAP since the previous annual inspection conducted in 2021.

Table 2: 2021 Operation Information for the Bottom Ash Pond

Parameter	Value
Total Surface Area[1]	49.1 acres
Height of Perimeter Dikes[2]	22 to 36 feet
Minimum Solids Elevation[3]	549.7 feet (Mean Sea Level Datum (MSL)
Maximum Solids Elevation[3]	585.03 feet MSL
Storage Capacity[4]	1346 acre-feet
Elevation of Bottom Ash Pond Water and Water Depth[5]	Most recent (11/30/22): +574.0 feet MSL (17.0 feet deep); Minimum: +572.0 feet MSL (15.0 feet deep); Maximum: +575.0 feet MSL (18.0 feet deep)
Approximate Volume of Impounded Water[6]	398 acre-feet
Approximate Volume of CCR[7]	591 acre-feet

[1] Based on a 2019 study, total surface area was calculated at 49.1 acres using available contour data in AutoCAD Civil 3D 2018.

[2] Determined by the elevation distance from the pond embankment's crest to the exterior toe of slope and surrounding land surface. Height has not changed since 2021 annual inspection.

[3] The values reported above are provided through cone penetrometer test (CPT) borings conducted between March 2020 and June 2020 across the interior of the BAP to extend through the ash/sediment materials and into the surface of the underlying clayey soils that form the base of the BAP. The minimum solids elevation refers to the bottom of the ash/sediment materials while the maximum solids elevation refers to the top of the ash/sediment materials within the BAP. Referenced in 2021 Bottom Ash Pond Investigation Report, dated 13 July 2021.

[4] The total storage capacity was estimated based on a maximum storage elevation of +586 feet MSL+ and available average surface area of about 49.1 acres in the Bottom Ash Pond.

[5] The elevation of the pond bottom was approximately +572 to +575 feet MSL based on the Bottom Ash Pond inspections.

[6] The approximate volume of impounded water for the Bottom Ash Pond was estimated based on the depth of water at the time of inspection by Mr. Colin McKean, the Landfill Process Owner at Gavin Power, 30 November 2022, and an estimated volume based on solid surface contours in AutoCAD.

[7] The approximate volume of CCR was calculated based a net volume reduction of 140,000 CY (87 acre-feet) from the 2021 Inspection Report total.

3. BOTTOM ASH POND VISUAL INSPECTION

The 2022 annual visual inspection conducted for the BAP is summarized below. All referenced photographs are in **Appendix A**; **Figure 3** shows the approximate locations where they were taken. Qualitative terms used to describe the inspection are summarized in **Appendix B.**

The annual inspection report discusses each embankment section of the BAP (i.e., west, south, east, and north embankments) separately. Although it is not regulated under the CCR Rule, this report also describes inspection of the Reclaim Pond since its structural integrity is relevant to the BAP. There were no appearances of actual or potential structural weakness in any component of the BAP during the 2022 inspection. In addition, there were no existing conditions[8] that were visually observed to be disrupting or that had the potential to disrupt the operation and safety of the BAP and appurtenant structures.

During the inspection, it was observed that active bottom ash excavation was occurring through the use of four (4) long reach excavators staged along the eastern edge of the BAP. Numerous trucks were observed coming into the BAP and being loaded with bottom ash for shipment to the landfill. Floating booms were observed in the BAP as a best management practice (BMP) to aid in keeping turbidity in the pond to a minimum while excavation was occurring. Site personnel indicated removal of bottom ash was occurring in preparation for BAP closure activities.

3.1 Western Embankment Section

The western embankment section (including crest, slopes, and toes) was in satisfactory condition (i.e., well vegetated and in a stable condition) based on the visual inspection. There was no observable settlement, rutting, significant erosion, or misalignment identified (Photographs 1 through 9). The following is a summary of the inspection observations:

1. The western exterior embankment contained no indications of slope instability and was well vegetated, (Photographs 1 through 4).
2. The pipe culvert observed toward the end of the ditch in the southwestern corner appeared to be in good working condition and free of debris. Only a slight bend at the top of the pipe was observed in the SW corner culvert, which is not currently affecting its operation (Photograph 5).
3. The interior embankment slope exhibited no visible indication of settlement, rutting, or misalignment. The interior of the slope was generally well vegetated, with several minor, localized areas of sparse vegetation (Photographs 6 through 9). The pond level has dropped due to ceasing bottom ash sluicing operations (Photograph 7). The spoils staging area in the SW corner of the BAP was observed to be only partially vegetated (Photographs 8 and 9).
4. The western embankment access road was found in stable condition and remains well maintained (Photograph 1).

3.2 Southern Embankment Section

The southern embankment section was in satisfactory condition (i.e., mostly vegetated and in stable condition) during the annual inspection (Photographs 10 through 18). The following is a summary of this visual inspection:

1. The exterior slope exhibited no visual indications of significant misalignment, erosion, rutting or settlement. Slope vegetation was overgrown at the time of inspection. Effective revegetation of most

[8] For example, significant and developing erosion gullies, soil movement that could impact slope stability, or apparent seeps along exterior embankment.

sparse cover areas identified in the 2021 inspection was observed in 2022. A few minor areas of sparse vegetation coverage remain (Photographs 10 through 12 and 18).

2. Previously documented areas of localized shallow hummocky terrain conditions and ground bulging along the interior embankment slope were monitored. These areas remain stable and well vegetated, and no sign of movement from the 2021 inspection was identified (Photographs 13 through 17). The pond level has dropped due to ceasing bottom ash sluicing operations (Photograph 13).
3. The southern embankment access road was found in stable condition and remains well maintained (Photograph 16).

3.3 Eastern Embankment Section

The eastern embankment section was in satisfactory condition (i.e., stable) with a few areas along the embankment of sparse vegetation. No visible indications of rutting, misalignment, or recent settlement were noted (Photographs 19 through 29). The following is a summary of this visual inspection:

1. The exterior slope appeared stable and the majority of the slope had well-established vegetative growth with isolated areas of sparse vegetation coverage (Photographs 19 through 23). Previously identified small crescent shaped scarp areas were observed near the toe. These areas continue to be well vegetated and show no sign of seepage or movement. (Photograph 23).
2. The pipe and support structures for the two nests of slurry pipelines entering the pond had surface rust in localized areas but appeared to be structurally sound and in satisfactory condition. Recent piping repairs were observed at the time of inspection (Photographs 21 and 22). The coal reject (pyrite) pipes were discharging from the Plant into the BAP during the inspection and no signs of leaking from the pipes were observed along the eastern face of the embankment. Note that the Unit 1 structure and piping was dismantled, and the Unit 2 structure and piping were removed the week after the inspection took place.
3. Active material deposition and dredging operations remain evident along the interior embankment slope. Portions of the interior slope continue to be buttressed by stockpiles of bottom ash; exposed surfaces are all contained within the embankment. Surface slopes appeared generally stable at the time of inspection. Some shallow erosion gullies were observed near the SE corner of embankment (Photograph 24). The sparse vegetation coverage along the interior slope is a result of active deposition activities in the area (Photographs 25 through 29). In addition to being the active work area, the inert nature of bottom ash and the associated lack of nutrients are likely additional contributors to the sparse vegetation in that area.
4. From the top of the interior embankment slope, the wooden platform supporting the coal reject and pyrite line discharges look to have been fixed/replaced since the 2021 inspection when it was observed to have a few loose supports, and some instances of apparent missing supports, in addition to displaying general signs of material decay (Photographs 26 and 28).
5. The eastern embankment access road was found in stable condition and remains well maintained (Photograph 20).

3.4 Northern Embankment Section

The northern embankment section was in satisfactory condition (i.e., stable) with several spots of sparse vegetation and some minor erosion rills. No visible indications of rutting or settling were noted. The terrain was slightly uneven along the exterior crest with occasional bare spots and some accumulations of coal along the top due to minor spillage from the conveyor belt that traverses the embankment coming from

the river on the way to the coal stockpile. (Photographs 30 through 37). The following is a summary of the visual inspection:

1. The condition of the exterior slope appeared stable and generally well vegetated with some isolated areas of sparse vegetation (Photographs 30 and 31). This embankment in the vicinity of the discharge pipe had previously documented settlement repairs along the toe of the exterior slope and exhibited no further indication of ground settlement. No evidence of seeps along the toe of the embankment were observed.
2. A riser pipe on the northern exterior slope with a heavy steel lid was reported to be a valve or access cover. This was found to be rusted and broken (Photograph 32). This riser pipe should be confirmed regarding use and repaired as required.
3. Near the northwest exterior toe, an open excavation with trench boxes inside was observed. This excavation was open during the 2021 inspection. Site personnel indicated that this excavation was related to repairs to a pipeline associated with the power station and is unrelated to the BAP. The excavation is scheduled for backfill during 2023.
4. The interior embankment slope was stable and well vegetated with only a few minor areas of sparse vegetation coverage, and a few instances of shallow hummocky terrain. No settling, rutting, or misalignment of the slopes was identified (Photographs 33 through 34), but minor evidence of erosion was noticed adjacent to the reclaim pond area (Photograph 35). Multiple areas of minor overgrown woody vegetation were observed along the toe of the interior slope, including vegetation growth within the pond at the washout from the coal conveyor tube that crosses Rt 7 (Photograph 33). The discharge pipes and support structures along the interior slope appeared functional and in satisfactory operating condition (Photographs 33 and 34). A repair made to one of the water return pipes to correct embankment incising through placement of flowable fill continues to function and prevent erosion below the splash pad.
5. The northern embankment access road was found to be in stable condition and remains well maintained (Photograph 34).
6. Spot seeding repair is needed under the conveyor (Photograph 37).

3.5 Reclaim Pond

The Reclaim Pond embankments were found to be in generally satisfactory condition. No visible indications of settlement or erosion were apparent. The crest, and slopes along the interior were vegetated (with only minor isolated bare spots) and the toe was armored with riprap. The riprap protected areas appeared to be in stable condition (Photograph 36).

4. ASSESSMENT OF RECENT INSTRUMENTATION DATA

4.1 Bottom Ash Pond

Two piezometers, labeled BAP-1, and BAP-2, are located at the BAC as indicated on **Figure 2**. Water level readings were obtained from piezometers BAP-1 and BAP-2, and the BAP. BAP-1 is near the drainage ditch along the western dike and BAP-2 is near the toe of the exterior slope of the southern dike. A plot of the monthly recorded readings from these piezometers and pond surfaces is presented in **Appendix C**, in accordance with 40 CFR § 257.83(b)(2)(ii). From January 2022 through November 2022, groundwater levels in BAP-1 and BAP-2 exhibited average elevations of +542.8 and +542.3 feet MSL, with standard deviations of 0.4 and 0.2 feet, respectively. Also, the maximum reading for BAP-1 was +543.08 MSL while the maximum reading for BAP-2 was +542.60 MSL.

The surface water levels in the BAP, collected by the Plant, had average elevations of +574.4 feet MSL, with a standard deviation of 0.8 feet. These results indicate that the recorded surface water levels in the ponds and piezometers have been relatively constant throughout the year. The 2022 results indicate a relatively lower average water level elevation compared with the 2021 average surface water elevation of +576.3 feet MSL in the BAP. Water levels were lower in 2022 because of no longer sluicing ash to the BAP. This has slowed the overall flow and allowed the BAP to be closer levelized with the reclaim pond.

5. REVIEW OF CCR OPERATING RECORD DOCUMENTS AND PREVIOUS INSPECTION ITEMS

For this inspection report, the following documents were reviewed regarding the status and condition of the Bottom Ash Pond, in accordance with the requirements of 40 CFR § 257.83(b)(1)(i):

- 7-day inspection reports for the BAP for 2022.
- Monthly inspection reports for the BAP, which also include records of recent instrumentation data for 2022.
- The 2021 Annual Inspection Report, Bottom Ash Pond dated 07 January 2022.
- Other documents that contain information on the design, construction, operation, and condition of the CCR unit, including the Closure Plans, previous instrument data before 2022, and the 2015 through 2021 Annual Inspection Reports.
- The 2021 Bottom Ash Pond Investigation Report, dated 13 July 2021.

Based on the review of the available data related to this inspection, there were no identified indications of potential structural weakness, slope instability, drainage or seepage issues, or other adverse conditions that would impact the stability and operation of this CCR unit.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 2021 Annual Inspection Follow-Up

A review of photographs and repair items from the 2021 Annual Inspection Report included the following recommendations for the BAP: monitor embankment slopes where subsidence or sloughing might occur, inspect the toe of slopes for potential seepage, monitor the condition of the wooden platform structure supporting Unit 1 bottom ash sluice inlet on the eastern embankment, reseed indicated bare spots along slopes to re-establish vegetation, regularly trim embankment slope vegetation, repair forming rills and gullies, and continue weekly inspections BMPs.

Based on the 2022 annual inspection and a review of weekly and monthly inspection reports, most of the above-identified repair items from the 2021 annual inspection of the BAP have been addressed and recommendations followed. Reseeding of bare ground areas identified last year was documented during this year's inspection. Areas of previous years' maintenance have been monitored and were observed to be stable during this year's inspection.

6.2 2022 Recommendations

6.2.1 Bottom Ash Pond

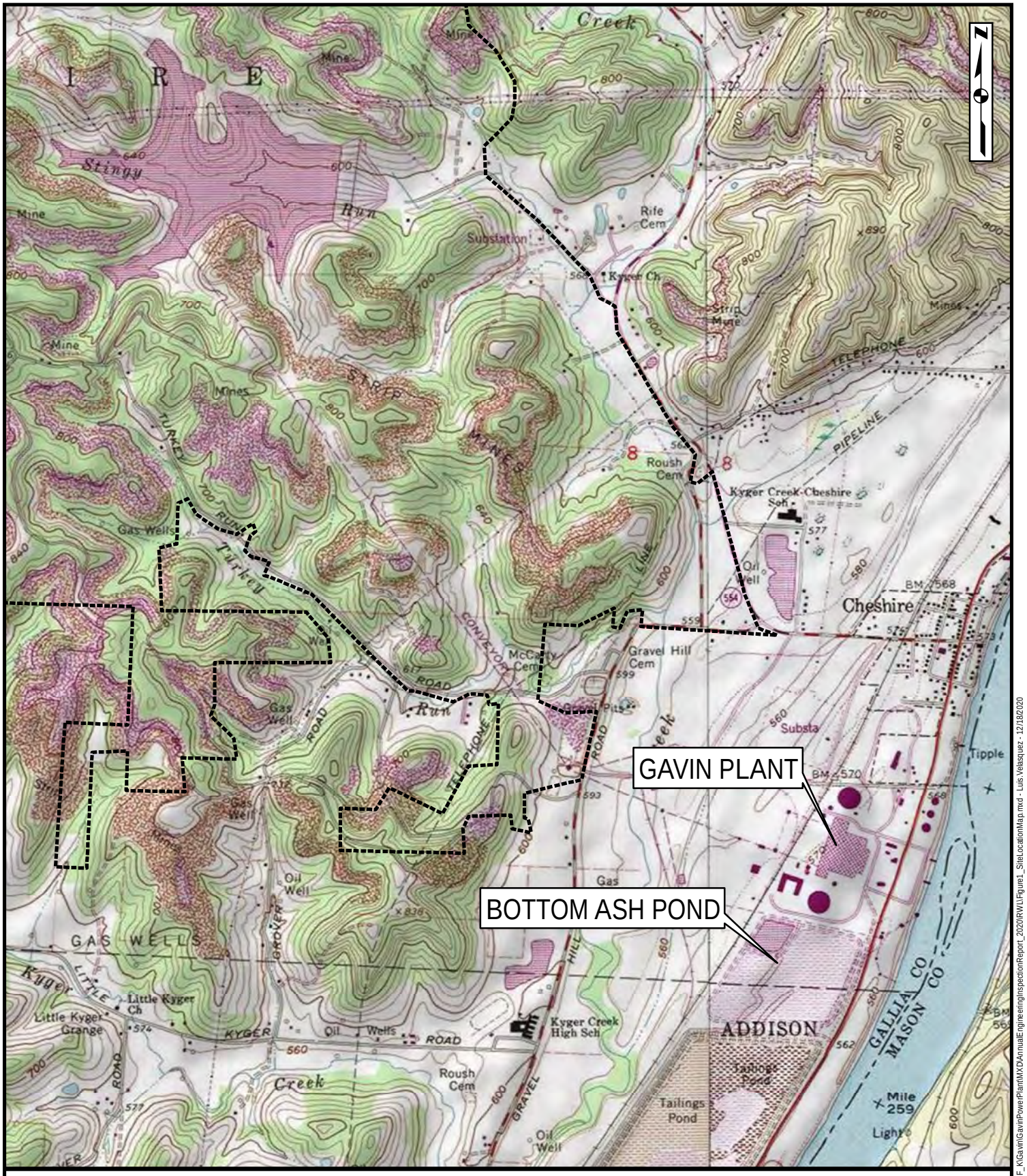
ERM recommends the following for the BAP based on the 2022 annual inspection:

1. Continue to monitor locations along embankment slopes where subsidence or sloughing might occur and inspect the toe of all slopes for potential seepage. Particular attention should be given to the area identified in this report along the eastern exterior embankment slope where bowling of water at the bottom of the slope was noticed, but there were no signs of seepage (Photograph 23). Additional locations that are hummocky in nature should also be monitored for any new signs of soil movement.
2. A riser pipe on the northern exterior slope was found to be rusted and broken (Photograph 32). This riser pipe should be replaced.
3. Reseed identified localized bare spots along the slopes to re-establish vegetation. Revegetation and potential application of nutrients or pH adjustment may be applied as necessary to aid in addressing localized areas where bare ground spots were observed.
4. Ensure regular trimming of embankment slope vegetation. Particular attention should be given to tall woody vegetation growth, which should continue to be mowed. Woody vegetation on peninsula of bottom ash should be removed during closure activities in 2023.
5. The weekly and monthly inspections continue to point out any areas of the BAP that require attention, which in turn have been documented and addressed in a timely fashion. It is recommended that the Plant continue these Best Management Practices.

6.3 CONCLUSIONS

Overall, the 2022 annual inspection indicated that the BAP CCR unit is in satisfactory operating condition and is stable. ERM identified several minor recommendations regarding repair and maintenance at the CCR unit, as listed above in Section 6.2.1. The weekly and monthly inspections have been effective at identifying and documenting areas requiring attention, and the Plant should continue the practice of promptly implementing the required maintenance. Recommendations for repair, while not immediately essential to the stability or the safe operation of the BAP, should be made as part of ongoing maintenance activities throughout 2023.

FIGURES



Gavin Power LLC Property Boundary

0 0.15 0.3 0.45 0.6 Miles

1:24,000

SOURCE
USGS scanned topographic quad maps provided by National Geographic Society (© 2021).

Figure 1: Site Location Map
Gavin Power LLC
Cheshire, Ohio

ERM

\\opsbdcfile01\data\Boston\Team\DMMV\Clients_F_K\Gavin\GavinPowerPlant\MXD\AnnualEngineeringInspectionReport_2020\RWL\Figure1_SiteLocationMap.mxd - Luis.Velasquez - 12/18/2020

Legend

- Active Piezometer Location

NOTES:
1. Locations are approximate
2. Aerial Imagery: ESRI World Imagery
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N

0 100 200 400 600
Feet

Figure 2: Bottom Ash Complex
Site Layout
Gavin Power LLC
Cheshire, Ohio

ERM

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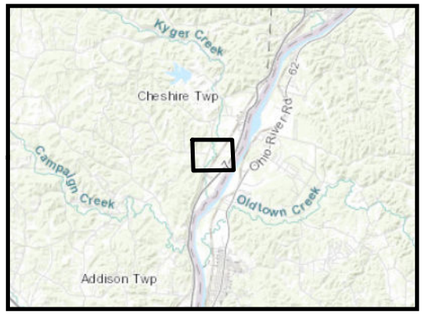

Legend

- # Photograph Location
- Active Piezometer Location

NOTES:

1. Locations are approximate
2. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.7

N

0 95 190 380 570

Feet

Figure 3: Visual Inspection Map
Bottom Ash Complex
Reservoir Site Layout
Gavin Power LLC
Cheshire, Ohio

ERM

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APPENDIX A ANNUAL INSPECTION PHOTOGRAPHS

Bottom Ash Complex

(Photographs taken during 2022 CCR Inspection on 10/11/2022)

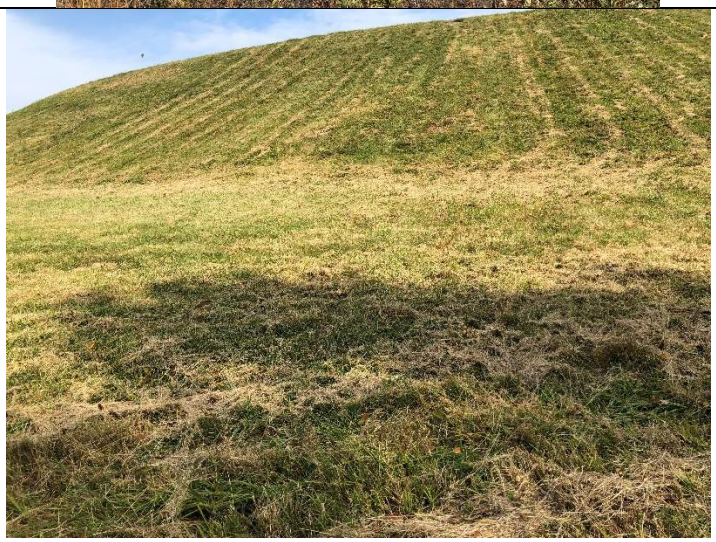
Photograph #1 View of western BAP embankment outside slope, from turnout for Reclaim Pond embankment. Slope is stable and well vegetated. Tall grass at the time of inspection (looking south).	
Photograph #2 Drainage ditch along exterior base of western embankment, near west side of the Reclaim Pond. Slope is stable and well vegetated (looking northeast).	
Photograph #3 Western embankment exterior slope and bottom ditch line toward south end of embankment. Slope is stable and well vegetated (looking north).	

Photograph #4 View of exterior southwest corner of BAP. Slope is stable and well vegetated (looking south).	
Photograph #5 View of drainage ditch culvert at SW corner of BAP. Slight top bend observed at culvert inlet, not affecting culvert's function (looking southwest).	
Photograph #6 View of southern side of the Reclaim Pond embankment from on top of western BAP embankment. Slope is stable and well vegetated. Turbidity booms in place around outlet structure. (looking east).	

Photograph #7 View of interior slope of western embankment from approximate middle of crest of western embankment. Slope is well vegetated with minor areas of sparse vegetation coverage (looking south). Pond level has dropped due to ceasing bottom ash sluicing operations.	
Photograph #8 View of top southwest corner of BAP embankment and spoils staging area inside of BAP. (looking south).	
Photograph #9 View of interior southwest corner and western embankment and spoils staging area (looking northeast).	

Photograph #10 View of southern embankment exterior slope from SW corner of BAP. Slope is stable and well vegetated (looking east). New gravel road leading and groundwater wells are visible in center right of the image, installed during 2022.	
Photograph #11 View down exterior slope of southern embankment. Slope appears stable and is densely vegetated with a few minor areas of sparse cover (looking south).	
Photograph #12 View down exterior embankment slope at SE corner of BAP. Slope is stable and well vegetated with minor areas of sparse cover (looking southeast).	

Photograph #13 View of interior southern embankment slope from SW corner of BAP. Slope is stable and well vegetated with small areas of sparse vegetation cover (looking west). Pond level has dropped due to ceasing bottom ash sluicing operations.	
Photograph #14 View of Bottom Ash Pond (BAP) from SW corner (looking northeast). Turbidity boom visible crossing the BAP from north to south.	
Photograph #15 View of interior southern embankment slope of BAP near its center, with intentionally placed bottom ash along the toe to prevent wind erosion. Slope is stable and well vegetated (looking north). Turbidity boom visible in center of image.	

Photograph #16 View of interior southern embankment slope of BAP. Slope is stable and well vegetated (looking northwest).	
Photograph #17 View of interior southern embankment slope from SE corner of BAP. Slope is stable and well vegetated with some areas of sparse vegetation cover (looking north). Long reach excavators visible in center of image in process of removing bottom ash.	
Photograph #18 View down exterior slope of southern embankment. Slope appears stable and is well vegetated (looking north).	

Bottom Ash Pond Complex

Photograph #19 View of top exterior eastern embankment slope and access road near SE corner of BAP. Slope is stable and well vegetated (looking north).	
Photograph #20 View of top exterior eastern embankment slope and BAP effluent pipelines and mid slope access road. Slope is stable and well vegetated with some areas of sparse cover (looking north). Ohio Route 7 visible on right side of image outside fenceline.	
Photograph #21 View of pipeline along eastern embankment exterior slope with some areas of sparse cover (looking west).	

Photograph #22 View of pipeline along eastern embankment exterior slope with some areas of sparse cover (looking north).	
Photograph #23 View of exterior eastern embankment slope, at approximate midpoint of BAP. Previously observed crescent scarp shape is visible. No soil movement or signs of seepage were visible consistent with previous years inspections. Area appears stable and well vegetated (looking east).	
Photograph #24 View of interior of BAP on eastern edge. Long reach excavators visible removing bottom ash for loading and hauling to on-site landfill. From approximate middle of the eastern embankment (looking northwest).	

Photograph #25 View from eastern embankment (looking north). Truck being loaded with bottom ash removed from BAP.	
Photograph #26 View of coal reject and pyrite line discharges at NE corner of BAP. Tall vegetation growth under platform was removed and select platform frame members appear to have undergone maintenance and replacement since last year (looking west).	
Photograph #27 View of interior eastern embankment of BAP. Bordering banks appear stable (looking northwest). Bottom ash being aggregated along eastern edge of BAP for removal. Former southernmost bottom ash sluice lines shown disconnected in right of image.	

Photograph #28 View of coal reject and pyrite line discharges at NE corner of BAP. Banks appear stable (looking northwest).	
Photograph #29 View of dredging operations along interior eastern embankment of BAP. Ash stockpiles and bordering banks appear stable (looking northwest).	
Photograph #30 View of exterior northern embankment slope from NE corner of BAP. Slope is stable and well vegetated (looking south).	

Photograph #31 View of exterior northern embankment slope near center of BAP. Slope is stable and well vegetated with some areas of sparse cover below coal conveyor along the top (looking south).	
Photograph #32 Corrugated steel riser in exterior slope of northern embankment of BAP. Appears to have been damaged by mowing equipment.	
Photograph #33 View from the northern embankment at the washout from the coal conveyor tube that crosses Rt 7. Minor woody stemmed vegetation visible. Temporary bottom ash berm installed to allow for separation of flows while excavation is taking place (looking south).	

Photograph #34 View of interior northern embankment slope and effluent inlet. Slope appears stable and densely vegetated (looking east). Coal conveyor in left side of the image.	
Photograph #35 View of excavation just beyond toe of northern embankment associated with plant piping repair. Northern embankment is visible in the upper right of the image. No signs of embankment instability. This is adjacent to the reclaim pond area. Scheduled for backfill in 2023 (looking east).	
Photograph #36 View of Reclaim Pond. Embankment slopes are stable, well vegetated, and armored at toe level (looking south).	

Photograph #37	
Spot seeding repair needed under conveyor at BAP.	

APPENDIX B QUALITATIVE INSPECTION TERMS

SUMMARY OF QUALITATIVE VISUAL INSPECTION TERMS

The terms described below are used to describe the overall condition and/or appearance of an observed embankment, structure, activity, or item. These terms are intended to give an overall qualitative judgment of the particular item. Please note, some of the terms described below were not used in this year's inspection, but are included as a comparative reference.

Satisfactory: A condition or activity that meets what would be minimally anticipated or expected from a stability, maintenance, or design viewpoint.

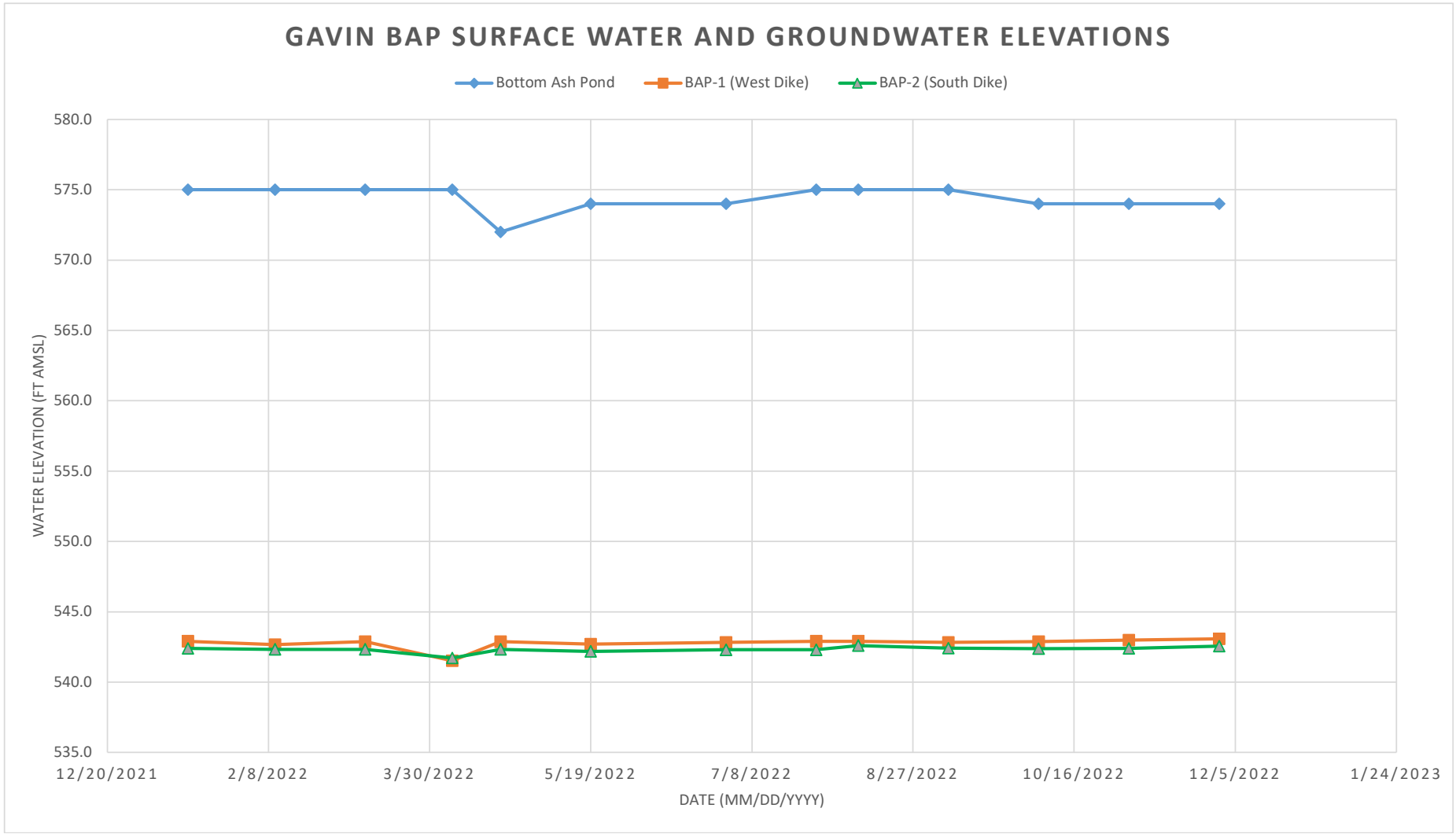
Poor: A condition or activity that does not meet what would be minimally anticipated or expected from a stability, maintenance, or design viewport. If a rating of "poor" is assigned, then corrective action is required in as timely a manner as possible.

Minor: A reference to an item or activity where the current maintenance condition is below what is normally desired, but does not cause concern from a stability of safety viewpoint. Generally, these conditions would be identified and could be remedied through the normal maintenance process.

Significant: A reference to an item or activity which would impact the stability or daily operating conditions of the CCR unit. Generally, significant features develop over time and would likely be a result of maintenance not occurring when minor deficiencies were first noted. If left unchecked, such conditions could eventually be a concern for the stability and safety of the CCR unit.

Excessive: A reference to an item or activity that is much worse than what is normal or desired and is of immediate concern to the stability or safety of the CCR unit. Such a condition may also impact the ability of the inspector to properly evaluate the particular item or area.

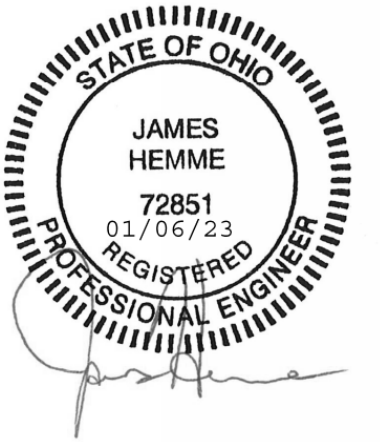
APPENDIX C RECENT INSTRUMENTATION DATA


GAVIN BAP SURFACE WATER AND GROUNDWATER ELEVATIONS
Bottom Ash Pond
BAP-1 (West Dike)
BAP-2 (South Dike)
580.0
575.0
570.0
565.0
560.0
555.0
550.0
545.0
540.0
535.0
WATER ELEVATION (FT AMSL)
12/20/2021
2/8/2022
3/30/2022
5/19/2022
7/8/2022
8/27/2022
10/16/2022
12/5/2022
1/24/2023
DATE (MM/DD/YYYY)

APPENDIX D PROFESSIONAL ENGINEER CERTIFICATION

PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify that I or an agent under my review has prepared this Annual Inspection Report for the Bottom Ash Pond, and am familiar with the provisions of the final rule to regulate the disposal of coal combustion residuals (CCR). I attest that this report has been prepared in accordance with good engineering practices and meets the intent of 40 CFR 257.84. To the best of my knowledge, the information contained in this Report is true, complete, and accurate.



James A. Hemme, P.E.

Date: 06 January 2023

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